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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,543	12/27/2001	Joseph H. Contiliano	ETH-1615	7364

27614 7590 03/22/2004

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EXAMINER
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PHILOGENE, PEDRO

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/033,543	Applicant(s) CONTILIANO ET AL.	
	Examiner Pedro Philogene	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/2/4/04 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2-6,8,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muhling et al. (5,169,400) in view of Rieger et al. (4,759,110).

With respect to claim 1, Muhling et al disclose a medical screw and driver system comprising: an elongated screw (1) having external threads (3) and an internal bore (5) extending through the screw at least a portion of the length of the screw, the screw being at least partially formed from a bio-absorbable material; as set forth in column 3, line 68, column 4, lines 1-5; an elongated driver (7,8) having a non-circular cross-section shape approximating the cross-sectional shape of the bore, as set forth in column 3, lines 65-68, column 4, lines 24-40, the driver being insertable into the bore and being matingly received therein to transfer rotational motion of the driver to the

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screw, the bore exhibiting a fitting-fit relative to the driver such that the cross-sectional shape of the bore is closely mated to the cross sectional shape of the driver, as set forth in column 3, lines 25-50, column 4, lines 32-40.

Although Muhling discloses a fitting relative to the driver, it is noted that Muhling did not teach of a shrink-fit relative to the driver, and the driver may be withdrawn from the bore without altering the cross sectional shape of the bore; as claimed by applicant. However, in a similar art, Rieger et al., evidence the use of a shrink-fit relative to the driver, and the driver may be withdrawn from the bore without altering the cross-sectional shape of the bore to provide a device that is reliable and avoids frequent breakdowns or failures.

Therefore, given the teaching of Rieger et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the shrink-fit method and the removable driver, as taught by Rieger et al., in the device of Muhling to provide a device that is reliable and avoids frequent breakdowns or failures.

With respect to claims 2-6,9, Muhling et al discloses all the limitations, as set forth in column 4, lines 1-5,19-23,30-40; column 2, lines 39-47 and as best seen in FIGS: 1-12.

With respect to claim 8, it noted that the above combination of references discloses all the limitations, except for a ratio of a 15/85 blend of TCP/PLA, as claimed by applicant. However, applicant fails to establish the criticality of such a ratio. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to reach the optimum range, since it has been held that

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where the general conditions of a claim are disclosed in the prior art, discovering the optimum range or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 7,10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muhling et al. (5,169,400) in view of Rieger et al. (4,759,110) in view of Tunc (5,827,287).

With respect to claims 7,8, it is noted that the above combination of references did not teach of a screw having an additive to the composition thereof selected from the group consisting of bio-absorbable glass, as claimed by applicant. However, in a similar art, Tunc evidences the use of bio-absorbable glass to cause nucleation and to form a self-supporting member.

Therefore, given the teaching of Tunc, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the additive of Tunc in the composition of Muhling/Rieger et al., to cause nucleation and to form a self-supporting member.

With respect to claims 10-20, the method steps, as set forth, would have been obviously carried out in the operation of the device, as set forth above. Furthermore the combination of references taught of changes in temperature, bonding and melting; however, they fail to teach of a temperature between 70 and 100 degree Celsius from four hours to about eight hours; as claimed by applicant. However, applicant fails to establish the criticality of such temperatures and hours, and the examiner believes that

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any temperatures and hours could have been used, since the device would have performed equally as well with any given temperatures and hours.

### ***Response to Amendment***

Applicant's arguments, see pages 1-3 of the remark, filed 2/24/04, with respect to the rejection(s) of claim(s) 1-20 under Muhling/Massa have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Rieger et al. It is noted that Rieger et al discloses a device with a shrink-fit connection wherein the disconnection is made without altering the shape of the bore.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4,519,713	05-1985	Godsey et al.
6,352,232	03-2002	Yorwarth
6,519,828	02-2003	Cook et al.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro Philogene whose telephone number is (703) 308-2252. The examiner can normally be reached on Monday to Friday 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P Shaver can be reached on (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pedro Philogene  
March 17, 2004

  
PEDRO PHILOGENE  
PRIMARY EXAMINER